Academy, we are enabled to say, that they contain almost the whole microscopic history of the dental system of the mammiferæ from the pulp to that of the ivory and enamel.—*Lond. and Edin. Month. Journ. Med. Sci.*, Jan. 1843.

9. *Structure of the Uterus.*—M. JOBERT conceives that the peritoneum is united to the surface of the uterus by true muscular fibres; and that the uterus consists of a single muscle, whose fibres, arranged in super-imposed layers, run in the following directions:—

1. The superficial longitudinal fibres, which may be called *median*, as they occupy the central raphé of the body of the uterus, rarely exist on its anterior surface; they are constantly found on its posterior aspect, where they consist of two thin super-imposed layers, commencing at the fundus of the uterus, and running to the uterine extremity of the vagina, to which they are attached, with the exception of a few which terminate on the neck of the uterus above the opening of the vagina. They adhere on the one hand to the peritoneum, on the other to the oblique fibres.

2. The superficial fibres of the anterior wall of the uterus form a layer covered by the peritoneum and lying on the deep fibres; they are so disposed that they do not embrace the entire surface of the wall of the uterus which they concur in forming, but they cross, before they reach the round ligament of the opposite side. Some of its fibres enter into the composition of the round ligament, while others pass behind it and terminate on the sides of the organ where they decussate with those from the posterior surface.

3. The remaining superficial fibres appertain to the tubes and to the ligaments of the ovaries; they are only apparent during pregnancy. Some arise from the fundus of the uterus, adhere to those which belong to the tubes, and run to the anterior part of the ligament of the ovaries, being slightly twisted on themselves; others more numerous, at first divergent, arise from the posterior surface of the fundus of the uterus, and also run to the ligament of the ovary. Finally, some transverse fibres, arising from the posterior surface, constitute the inferior portion of the organ.

The neck of the uterus is composed of the same tissue as the body. The fibres composing it represent semicircles, and decussate without intermixing in the direction of the commissures. This semi-annular arrangement is more evident when the female has borne children, and when the orifice of the uterus is transverse. Are the fibres of the neck of the uterus confounded with those of the vagina? M. Jobert thinks they are.—*Lond. and Edin. Month. Journ. Med. Sci.*, April, 1843.

10. *Respiratory Capacity of the Lungs.*—M. BOURGERY read to the Academy of Sciences on the 23d January last, a memoir on the relations between the intimate structure and the functional capacity of the lungs in the two sexes and at different ages. By means of a hydro-pneumatic apparatus, the author has constructed a table of the numerical value of the respiration in seventy individuals —fifty males and twenty females—and the following are the results which he obtained:—

1. *Ceteris paribus*, the respiration is more energetic, the younger and thinner the subject. No other condition of strength or health is equivalent to the influence of youth.

2. At the same age, the volume of the respiration of the male doubles that of the female; this is a fundamental difference between the two sexes, and suffices to explain the superiority of the vital acts in the male.

3. The plenitude of respiration in both sexes occurs at the age of thirty, and corresponds to the complete development of the capillary air-vessels of the lungs. In a well-made man, aged thirty, the amount of a forced respiration is from 2.50 to 4.30 litres, and in the females from 1.10 to 2.20 litres. In a boy of fifteen, it is 2 litres; in a man, aged eighty, it is only 1.35 litres. Thus the respiratory power of a strong man at thirty represents that of

two feeble men,
or two boys, aged fifteen,
or two strong women,
or four weak women,
or four boys, aged seven,
or four old men, aged eighty-five,

And the respiratory power of a strong woman, aged thirty, is equal to that of
one feeble man,
or one boy, aged fifteen,
or two feeble women,
or two boys, aged seven,
or two men, aged eighty-five.

4. The volume of air required by an individual in an *ordinary respiration* augments gradually with the age. The relations between the ages of seven, fifteen, twenty, and eighty, are geometrical, and represented by the numbers—one, two, four, eight. An adult man habitually respires four times as much as an infant, and twice as much as a female of fifteen. An old man respires twice as much as an adult. This progressive increase is the consequence of the diminution of the energy of the pulmonary sanguification—that is to say, this faculty diminishes from infancy to old age, in a ratio represented by fractional numbers, the inverse of those above given, $1, \frac{1}{2}, \frac{1}{4}, \frac{1}{8}$.

5. During a forced respiration, the aerial capacity of the lungs, or their permeability to air, presents two periods,—the one ascending from infancy to thirty years,—the other descending from thirty years to old age. The first augments in a regular relation of one, two, three, from seven to fifteen and thirty years; the second diminishes from three to two and a half from thirty to fifty years, and from two and a half to one and a half from fifty to eighty years.

In youth, the respiration is tripled in twenty-three years, and augments one-ninth in each year. From the adult age it diminishes in twenty years two-fifths, or one-hundredth in a year. From fifty to sixty it diminishes but one-fifth in ten years, or one-fiftieth in each year. From sixty to eighty it falls almost one-half more, or one-twentieth in each year.

6. Thus the respiration at any given age may be more or less developed in any subject compared with another, but the rate of diminution is constant in all, and in a nearly equal proportion. The diminution of the respiratory faculty must play a considerable part in the gradual extinction of the vital forces as age advances.

7. In proof of this last proposition, the relation of a forced and ordinary respiration diminishes with the age. It is as one to twelve, at three years of age, as one to ten at fifteen years, as one to nine at twenty years, as one to six at twenty-five and thirty years, as one to three at sixty years, as one to one-half or one-third at eighty years; whence it follows that in youth there is an immense respiratory power in reserve for any violent exertion; while in old age the subject is at once out of breath.

The respiratory faculty is impaired by the capillary rupture of the aerial and sanguiferous canals, improperly called emphysema of the lung. This rupture accompanies more or less, but inevitably, every great respiratory effort. Though it appears to be a senile earing of the lung, it nevertheless commences in infancy, and gradually augments with the age, from the mere reiteration of the function of respiration. All the diseases of the lung, however temporary, hasten this species of disorganization.

The ultimate result of senile emphysema, uncomplicated with any other disease, is to assimilate the cavernous lung, and imperfectly sanguifying respiration of old age to the locular lung and incomplete respiration of the reptile.

As disease, like old age, causes an augmentation of ordinary, and a diminution of forced respiration, this difference affords a new means of diagnosing pulmonary affections.—*Lond. and Edin. Med. Journ. Med. Sci.*, April, 1843.

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11. *On Menstruation.*—M. Raciborski, in a letter to the French Academy of